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EXAMINER	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 14

Application Number: 09/416,679
Filing Date: October 12, 1999
Appellant(s): STACEY ET AL.

MAILED
SEP 10 2004
GROUP 2800

Stacy et al.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 12, 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 2, 3, 5-12, and 14-17 stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,946,309	Westberg et al.	8-1999
6,195,353	Westberg	2-2001

(10) Grounds of Rejection

Claims 2, 3, 5-12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westberg et al. (US 5,946,309) in view of Westberg (US 6,195,353). See the Final Rejection contained in the Office Action dated October 6, 2003.

Analysis and Comments

NOTE: The italicized portions refer to the claim limitations and the non-italicized portions refer to how the Examiner interprets the reference reading on the claims. Referring to claims 2, 12, 16, and 17:

<u>What Westberg et al. ('309) discloses:</u>

Westberg et al. discloses a system that can multiplex data from a variety of AAL protocols over a single communication channel in ATM. See Fig. 3, and col. 1, lines 1-10. As shown in Fig. 3, the AAL-MUX 207 corresponds to the "CPS ATM adaptation device"; the inputs 320 and 325 correspond to data streams found in a "narrow band network"; and the ATM network connecting the transmitting station 305 and receiving station 315 represents a "broad band network." (*A common part sublayer (CPS) ATM adaptation device, for interfacing between a narrow band network and a broadband network)*

The "ingress" direction is when data travels from the narrowband to the broadband network, or from the terminology of Westberg et al., from the AAL input layer to the ATM network. The AAL-MUX 207 receives communication from each of the various AAL layers, for example, AAL1 320 and AAL5 325. The data is packed into the payload of standard ATM cells. The AAL-MUX 207 then multiplexes the data into one common ATM stream. See col. 3, line

61-col. 4, line 3. Thus, Westberg et al. discloses that the AAL-MUX 207 multiplexes the various types of AAL traffic onto the ATM network, regardless of the type of AAL traffic. See also col. 3, lines 43-57 for further evidence of multiplexing independent of the AAL layer ("by employing the Hybrid AAL, bandwidth is more effectively utilized because hybrid data can now be transmitted over a single, commonly shared communication channel, rather than separate communication channels"). *(functionally partitioned to provide ... multiplexing of ingress traffic to the broadband network independently of the AAL type of that traffic,)*

As discussed, the "ingress" direction is from the AAL layers to the ATM network. It follows that the "egress" direction is the reverse, that is, from the ATM network to the AAL layers. *(and incorporating ingress and egress paths respectively to and from the broadband network,)*

The AAL-demux 310 as shown in Fig. 20 provides an "egress path." As shown in Fig. 20, the incoming data from the ATM network is never buffered. Also, the specification of Westberg et al. does not mention that data being buffered in the AAL-demux 310, so the AAL-demux 310 provides a "through path" for the incoming data to the external ports. *(wherein said egress path provides on a through path)*

As shown in more detail in Fig. 20, the AAL-demux 310 takes the broadband data from the ATM network and, using control information, directs the communication data stored in the various ATM cells to the appropriate AAL layers, e.g., AAL1, AAL5, and AAL, located at the

receiving station 315. The process of directing the AAL data to the correct layer can be considered "segregation," but before this step can occur, the data in the ATM cell is "delineated," or separated so that they can be directed to the correct layer. (*segregation and delineation of incoming data of incoming data units on to respective external data ports,)*

What Westberg et al. ('309) does not expressly disclose:

Westberg et al. does not expressly disclose the scheduling or prioritization of ingress traffic nor does Westberg et al. expressly disclose a common memory for payload storage for multiplexing ingress traffic.

What Westberg ('353) discloses:

Westberg discloses a similar system that multiplexes short packets of an AAL type and multiplexes them into an ATM stream. Because the short packet multiplexer multiplexes short packets from numerous connections, each of which may be sending short packets simultaneously, the order in which the short packet multiplexer multiplexes the short packets is determined by a programmed priority schedule. See col. 4, lines 51-55. Also on the ingress path is an input buffer that provides memory storage for the incoming traffic. See Fig. 5A. Thus, Westberg discloses that the use of memory for the ingress path for storage that is used in the multiplexing, scheduling, and prioritization of data at the ATM and AAL layers. (*functionally partitioned to provide scheduling and prioritization...wherein said ingress path incorporates a common memory for payload storage whereby to perform multiplexing at both AAL and ATM layers)*

Obviousness and Motivation:

It would have been obvious to a person of ordinary skill in the art at the time of the invention to include an ingress memory of Westberg ('353) to help implement the prioritization and scheduling functions taught by Westberg ('353) in the system disclosed by Westberg et al. ('309).

One of ordinary skill in the art would have been motivated to do this because in receiving many types of incoming traffic, it would be desirable to multiplex them together in a more organized fashion. If one type of traffic is more time-sensitive than another type of traffic, then adding this feature reduces the amount of data overall that fails to reach its destination schedule on-time. Time-sensitive data is given a higher priority in the multiplexing schedule has a better chance of reaching the destination on-time.

(11) Response to Argument

On page 6, Appellant argues that the claimed invention is compatible with standard ATM and the system taught by Westberg et al. ('309) is not compatible. The Examiner respectfully disagrees. As disclosed by Westberg et al. ('309), one of the objects of the invention is to provide the capability of transporting telecommunications data from multiple AALs **using the ATM protocol**. See at least col. 1, lines 65-67. As discussed previously, data from the various AAL layers are multiplexed together and sent over the ATM network. Thus, Westberg et al. ('309) is compatible with standard ATM.

On page 7, Appellant argues that Westberg et al. ('309) does not teach how to partition an ATM adaptation layer to provide multiplexing, scheduling, and prioritization. The Examiner respectfully notes that this feature should be addressed taking into consideration the combined teachings of Westberg et al. ('309) and Westberg ('353), not Westberg ('353) alone. Westberg et al. ('309) discloses that the AAL-mux provides multiplexing functions. Westberg ('353) discloses the functional features of prioritization and scheduling. In combining the teachings of Westberg et al. ('309) and Westberg ('353), the functional features from Westberg ('353) would have to be included in Westberg et al. ('309) as additional elements because they perform different functions. The AAL-mux of '309 now modified would have to be "partitioned" to provide these additional functions because they did not exist there before. Thus, the system resulting form the combination of the references would provide functional partitioning.

On page 7, Appellant argues that the claimed invention does not use an egress buffer and that Westberg et al. ('309) includes egress buffering, even though the specification of Westberg et al. makes no mention of this feature. The Examiner respectfully disagrees for two reasons. First, it is noted again that no buffer or memory exists or is discussed in the AAL-demux 310 of Westberg et al. ('309). The process of demultiplexing includes extracting the control data from the ATM cell header, where the AAL address information and the ATM cell sequence number information is then used to control the demultiplexer. The demultiplexer then directs the communication data carried by the various ATM cells to the appropriate AAL layers located at the receiving station in accordance with the control data. See col. 9, lines 35-51 and Fig. 20. This can be accomplished without necessarily buffering the cells. Second, assuming *arguendo* that a person of ordinary skill in the art would see that a buffer is required in the AAL-demux of

Westberg et al., that same person of ordinary skill in the art would see that the Appellant's claimed invention would also require a buffer because both inventions work the same way. Appellant mentions that the egress direction can act as a "flow through" on page 8, lines 14-19, but no explanation of how a "flow through" works is explained in this section. The majority of the discussion in Appellant's specification regarding the processing of data on the egress path can be found on page 19, line 18 to page 23, line 15. In this section, Appellant discusses using the header information to determine which connection is proper. Appellant goes on to discuss other look-up functions and error checking functions that can also occur with the data. Overall, the demultiplexing method discussed in Westberg et al. ('309) is substantially similar to the segregation/delineation method discussed in Appellant's claimed invention. If Appellant's argument regarding the incomplete specification of Westberg et al. ('309) is true, then Appellant's specification is likewise incomplete. Thus, the Examiner concludes that there is no buffering in Westberg et al. ('309), a conclusion that is consistent with both Westberg et al. ('309)'s specification and Appellant's specification.

On pages 7-8, Appellant argues that Westberg '353 pertains to SSCS as opposed to CPS. The Examiner respectfully disagrees, but even if Appellant is correct, the Examiner contends that this is irrelevant. The Examiner only relies to Westberg '353 solely for its teachings on prioritization, scheduling, and ingress buffering. All other claim limitations are met by reliance on the disclosure of Westberg et al. '309, keeping in mind that it is the combination of the references that matters, not the individual teachings of each reference. Thus, all of Appellant's arguments regarding Westberg '353's "other" teachings are irrelevant.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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April 14, 2004

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